DOCUMENT RESUME

ED 437 141 PS 025 307

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TITLE	Improving Access to Primary Care for Adolescents: School Health Centers as a Service Delivery Strategy. MCH Policy Research Brief.
INSTITUTION	Johns Hopkins Univ., Baltimore, Md. School of Hygiene and Public Health.
PUB DATE	1995-01-00
NOTE	18p.
CONTRACT	MCU-243A19
PUB TYPE	Information Analyses (070) -- Reports - General (140)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Adolescents; Child Health; Elementary Secondary Education; Primary Health Care; *School Health Services
IDENTIFIERS	School Based Clinics; *School Based Health Clinics; School Based Services

ABSTRACT

Recognizing that school-based health centers are one of the most promising recent innovations to address the health and related needs of adolescents, this report provides information on these centers as a strategy to improve the access of adolescents to primary care. The report is intended to assist state and local Maternal and Child Health (MCH) policy makers, state and local health department personnel, administrators, and program managers in assessing the ability of school health centers (SHCs) to meet the primary care needs of adolescents. The development of SHCs is outlined and the defining elements of primary care are defined. Starfield's model of primary care is used as a conceptual framework to assess the strengths and weakness of SHCs as primary care sites for adolescents. Research findings on SHCs are summarized in a table delineating potential strengths and weaknesses with respect to the seven defining attributes of primary care: (1) first contact; (2) continuous; (3) comprehensive; (4) coordinated; (5) community-oriented; (6) family-centered; and (7) culturally-competent. Findings indicate that SHCs have many strengths, including elimination of access barriers; provision of a variety of services to meet adolescents' physical, mental, and social needs; successful coordination with managed care organizations; and use of creative ways to involve families. Weaknesses include restriction of operation time; high turnover; lack of evaluation research; and difficulties in coordinating care with other community providers. (Contains 49 references.) (KDFB)

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ED 437 141

MCH POLICY RESEARCH BRIEF

Improving Access to Primary Care for Adolescents: School Health Centers as a Service Delivery Strategy

ISSUE SUMMARY

In 1991, the Office of Technology Assessment[1] concluded that school-based health centers are "the most promising recent innovation to address the health and related needs of adolescents." Numerous researchers and government studies report that these centers increase adolescents' access to health services.[2,3,4,5,6] Although the past two decades have seen a rapid growth in school health centers, with a reported total number of 623 sites nationally in Fall 1994,[7] these centers still are not implemented extensively in the United States. Data from the Center for Population Options[2] reveals that 418 school-based health centers operated during the 1991-1992 school year; of these, 330 were in high schools providing services to 270,000 students, approximately 2% of the estimated 13.2 million U.S. students enrolled in grades 9-12 during the same year[a].[8] However, recent national health care reform proposals, including legislation proposed by President Clinton and Senator Kennedy, support an expanded role for school health centers as an integral part of an improved health care system of services for children and adolescents.[9,10] Additional funding for such centers is becoming available, for example, from the Bureau of Primary Health Care and the Maternal Child Health Bureau of the Health Resources and Services Administration, even prior to enactment of health care reform legislation.

School-based health centers (SBHCs), by definition, are located in schools or on school grounds. School-linked health centers (SLHCs) are located near the school and have a formal relationship with the school. Effective SLHCs often co-locate health center staff at the school at specified times each week. School health centers (SHCs) include both SBHCs and SLHCs[b]. Most often, SHCs serve only the children and adolescents enrolled in school, but some also aim to serve family members, students from other schools, or the community in general.

The early designs for SHCs were essentially pediatric (medical) models of care which utilized nurse practitioners as clinic leaders and in expanded clinical roles.[11] Traditionally, school health services have focused on health screening, referral, and health education/counseling. SHCs provide these, as well as medical diagnosis and treatment services. Most SHCs strive to provide comprehensive primary care health services. In recent years, the SHC model has evolved to encompass an even broader range of medical services, particularly mental health care, and to create linkages with community-based organizations also serving adolescents who are in schools.[12,13] Despite this expanded mission, primary care medical services are likely to remain an essential component of SHCs.

Considerable diversity exists around the country in the range of services provided in SHCs, and in the staffing and organization of these centers. To promote the continued development of SHCs, it is useful to provide criteria to guide the processes of planning, implementing, expanding, and measuring the impact of services provided. Prior attempts to evaluate SHCs often have focused on health outcomes, such as teen pregnancy, and health behaviors of adolescents enrolled in the centers. More recent evaluation efforts have assessed the degree to which school health centers provide comprehensive or "essential" services.

The purpose of this Policy Research Brief is to assist MCH policy makers, state and local health department personnel, administrators, and program managers in assessing the ability of SHCs to meet the primary care needs of adolescents. If SHCs are to become an important part of the primary care system, they should be judged by the same standards as other primary care systems. Evaluating the ability of SHCs to provide quality primary health care services to their target population is essential. The Maternal and Child Health Bureau defines primary care as follows:[14]

> Primary care for children and adolescents can be defined as personal health care delivered in the context of family, culture and community whose range of services meets all but the most uncommon health needs of the individuals and families being served. In addition, primary care is the integration of services that promote and preserve health; prevent disease, injury and dysfunction; and provide a regular source of care for acute and chronic illnesses and disabilities. Primary care serves as the usual entry point into the larger health services system and takes responsibility for assuring the coordination of health services with other human services. The primary care provider incorporates community needs, risks, strengths, resources, and cultures into clinical practice. The primary care provider shares with the family an ongoing responsibility for health care.

This Policy Research Brief uses Starfield's model of primary care as a conceptual framework to begin to assess the strengths and weaknesses of SHCs as primary care sites for adolescents. Research findings on SHCs are summarized with respect to the seven defining attributes of primary care: **first contact, continuous, comprehensive, coordinated, community-oriented, family-centered,** and **culturally-competent care**[c].

This MCH policy research brief is the first in a series being developed by the JHU Child and Adolescent Health Policy Center in collaboration with other research centers and projects both within and outside of the Johns Hopkins University School of Hygiene and Public Health. The intent of these briefs is to provide state and local MCH program personnel with access to science-based information for planning and advocacy regarding issues related to primary care, systems development, or accountability.

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This MCH policy research brief is a joint project of the Child and Adolescent Health Policy Center (CAHPC) and the Center for Adolescent Health Promotion and Disease Prevention (CAHP), two Centers within the Department of Maternal and Child Health, The Johns Hopkins University School of Hygiene and Public Health. The CAHPC was established in 1991 by the federal Maternal and Child Health Bureau to address new challenges found in amendments to Title V of the Social Security Act (MCH Services Block Grant) enacted in the Omnibus Budget Reconciliation Act (OBRA) of 1989. The purpose of the CAHPC is to draw upon the science base of the university setting to help identify and solve key MCH policy issues regarding the development and implementation of comprehensive, community-based systems of health care services for children and adolescents. Projects are conducted to provide information and analytical tools useful to both the federal MCH Bureau and the State Title V Programs as they seek to meet the spirit, intent and content of the Title V legislation and the challenges of addressing the unique needs of MCH populations and programs in health care reform. The Center for Adolescent Health Promotion and Disease Prevention (CAHP) is one of 12 prevention research centers funded by the Center for Disease Control and Prevention. Center for Disease Control and Prevention, National Centers for Chronic Disease Prevention and Health Promotion. The mission of the CAHP is to undertake research that focuses on the development and evaluation of programs and policies that promote health and prevent disease among adolescents, particularly urban and rural youth.

Defining Elements of Primary Care[14]

First Contact Care is the usual entry point into the expanded health care system. The primary care provider is responsible for guiding the client to the most appropriate source of care. Within the system, the provider is contacted for all non-referred health care needs so that an informed judgement is made and guidance is given regarding the most appropriate source of care.

Continuous Care refers to the longitudinal use of a regular source of care over time, regardless of the presence or absence of disease or injury. It involves a patient-provider relationship based on established trust and knowledge of the patient and his or her family. Within the system, a "health care home" is established for each child and adolescent. This home is the repository of a unified record of all health care that is provided.

Comprehensive Care provides a continuum of essential personal health services that promote and preserve health, prevent disease, injury and dysfunction, as well as provide care for acute and chronic illnesses and disabilities. Primary care is inclusive of the many dimensions of health beyond physical components, including the social, environmental, spiritual, developmental and intellectual aspects of health. It directly provides services needed by a substantial proportion of the population and arranges referral for services to meet needs that are relatively uncommon or rare in that population.

Coordinated Care is the linking of health care events and services. It requires the establishment of mechanisms to transfer information and the incorporation of that information into the plan of health care. Primary care has the responsibility and obligation to transfer information to and receive it from other resources that may be involved in the care of children and adolescents; and, to lead in the development and implementation of an appropriate plan for management and prevention. Coordination ensures that the more narrowly focused perspectives of specialists are combined into a holistic view.

Community-Oriented Care takes into account the needs of a defined population. Delivery of primary care services is based on an understanding of community needs and the integration of a population perspective into clinical practice. Primary care providers are responsible for supporting public health roles and activities through epidemiologic awareness and reporting of specific health problems identified in the course of delivering personal health care services. Primary care providers contribute to and participate in community diagnosis, health surveillance, monitoring and evaluation conducted as a routine function of public health agencies. Community-oriented care assures that the views of community members are incorporated into decisions involving policies, priorities and plans related to the delivery of primary care.

Family-Centered Care recognizes that the family is the major participant in the assessment and treatment of a child or adolescent. As such, families have the right and responsibility to participate individually and collectively in determining and satisfying the health care needs of their children and, in most instances, adolescents. Being family-centered means that policies regarding access, availability, and flexibility take into consideration the various structures and functions of families in the community being served. Finally, it means that primary care needs to understand the nature, role, and impact of a child's health, illness, disability, or injury in terms of the family's structure, function and dynamics.

Culturally Competent Care incorporates cultural differences into the provision of health care. Services should be acceptable to all of the groups of people in the community who may be distinguished by common values, language, world view, heritage, institutions or beliefs about health and disease. A mechanism should be in place to represent the views of these groups and incorporate them into decisions involving policies, priorities and plans related to the delivery of services.

[a] *Although there is growing interest in implementing school health centers for elementary school age children, the vast majority of operating Centers serve adolescents. Most research on school health centers to date, and hence this brief, therefore focuses on the adolescent population.*

[b] *Most national research studies, with the notable exception of those by Advocates for Youth, focus on school-based health centers alone, as opposed to school-linked health centers. The term "school health centers" was chosen for this policy research brief because, when possible, data on both school-based and school-linked health centers are included.*

[c] *These defining features of primary care were first described by Barbara Starfield[14] and later endorsed by the Maternal and Child Health Bureau, Department of Health and Human Services, Health and Human Resources Administration, Public Health Service[14] in its definition of "primary care for children and adolescents."*

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ANALYSIS OF RESEARCH FINDINGS

FIRST CONTACT CARE

Potential Strengths of SHCs

SHCs eliminate many access barriers faced by adolescents

- SHCs often provide services free of charge or at minimal charge, are conveniently located at or near school campuses, and are often specifically established to address age-specific and cultural needs including a variety of physical, emotional and social issues.[3,4]

SHCs reach underserved, low-income, and high-risk populations

- During 1991-92, 39% of students using SHCs were uninsured and 28% were covered by Medicaid.[2]
- In terms of utilization, SHCs successfully deliver health care to needy youth.[15]
- SHCs reach between 58% and 75% of in-school students.[2,16,17,18]
- Frequent center users (those visiting a clinic 15 times or more per year) have been found to have a significantly higher percentage of mental health-related visits, and demonstrate more high-risk behaviors such as alcohol use, sexual activity, and both family and peer relationship problems than average center users of the same clinics (those visiting three times a year).[19]

SHCs are often a sole source of care

- Many students served by a SHC have no other regular source of care and would otherwise rely on a local emergency room for their medical care.[22,23]
- In New York City, 38% of students in public schools with SHCs reported they would not have sought help for a problem addressed by the SHC if no center had existed.[24]

Potential Weaknesses of SHCs

Often centers must restrict their operation hours and days due to tight budgets, resulting in access problems for youth [4,20]

- McKinney & Peak[2] found that although 85% of centers they surveyed were open Monday through Friday, only 3% provided services on Saturday and slightly over half (55%) of centers were open during the summer.
- Seventy percent of the centers surveyed by McKinney & Peak[2] try to alleviate the service delivery barriers created by limited hours by referring students to some source of after-hours or emergency care. However, there is no evidence that 24 hour availability for clients is better achieved by private offices and clinics.[21]

CONTINUOUS CARE

Potential Strengths of SHCs

SHCs with stable sources of funding and trained personnel successfully operate as "health care homes" for adolescents [5,25,26,27]

- Unpublished data from The School-Based Adolescent Health Care Program[26], shows that in 24 SHCs it sponsored during 1992-1993, more than 86% of visits were by returning patients.

Potential Weaknesses of SHCs

A high turnover of personnel prevents longitudinal relationships between student and center staff

- SHCs often fail to provide competitive salaries in comparison to other health care settings, such as hospitals or HMOs.[4]
- Centers may use rotating physicians from nearby medical schools to save money.[21]

COMPREHENSIVE CARE

Potential Strengths of SHCs

Elements of essential school health services and service components have been described extensively. [3,5,29,30,31,32]

SHCs provide a variety of services to meet the physical, mental, and social needs of adolescents

Percentage of SHCs offering the following services to secondary grade students:

- injury treatment (93.5%)[7]
- physicals (87.8%)[7]
- sports physicals (82.6%)[7]
- prescriptions (81.9%)[7]
- laboratory services (81.3%)[7]
- immunizations (77.6%)[7]
- pregnancy testing (81.4%)[7]
- gynecological exams (70.3%)[7]
- medications dispensed (69.7%)[7]
- chronic illness management (67.7%)[7]
- nutrition education (96.8%)[7]
- social work services (69%)[7]
- outreach (58%)[7]
- street outreach (13%)[7]
- job counseling (25%)[7]
- day care for children of students (15%)[7]

Adolescents use SHCs for a variety of needs

- Among 24 SHCs funded by The Robert Wood Johnson Foundation during the 1991-1992 school year, 29% of visits were for acute illness or injury, 18% of visits were for mental health problems, and 33% of visits were for physical exams and other preventive services such as immunizations, nutrition counseling, and dental care.[33]
- Teens using Denver school health center services present with a wide variety of medical problems; as a relationship with the center is established, many students come to receive services for their sexual and reproductive needs.[34]
- Mental health problems are often discovered in visits by adolescents visiting centers for some other complaint.[35]

Potential Weaknesses of SHCs

While SHCs appear able to provide a wide range of "essential" services, little research has evaluated the adequacy of services provided against the actual needs of the populations served.

The scope of services provided by a SHC is largely a function of funding

- Brellochs & Fothergill [32] report that the "two primary reasons for variations in service capacity are 1) different levels of community support for provision of reproductive health services at school sites, and 2) the amount of dollars that are available to support the program" (p.5).

Provider availability may predict scope of services offered

- Studies focusing on SHCs in rural areas have shown that lack of provider availability limits range of SHC services.[29]
- Mid-level health care professionals, usually the primary staff members in many SHCs, are in short supply in the United States.[43]

Many SHCs are unable to provide a full-range of reproductive health care services on-site

- Although more than 3/4 of SHCs offer counseling for birth control, only 36.7% offer prescriptions for oral contraceptives, 30% offer condoms, 19.6% offer oral contraceptives, and only 2.9% offer Norplant.[7]

Many centers are not able to employ full-time health and health-related providers

- McKinney and Peak[7] found that, on average, clinics employ physicians to work one-quarter (24%) of a full-time work week. In addition, nurse practitioners and physicians' assistants were much more likely to be full-time staff members in those SHCs in urban areas, which serve primary and secondary grades combined, and which were in operation for at least 5-9 years.

Potential Strengths of SHCs

Many SHCs utilize data management information and outcome analysis systems

- One information management program in development at the University of Colorado, which collects data on user health indicators, utilization, referral and follow-up information, and program outcomes, is being used in several hundred SHCs nationwide.[34]
- In Connecticut, the Hartford Primary Care Consortium has implemented a city-wide computerized and linked clinical information system among hospital outpatient departments, community health centers, schools, and individual practices.[35]

Some SHC programs have successfully coordinated services with managed care organizations

- In St. Paul, one successful model of coordination uses protocols and criteria for on-site and referral care, including a tracking system that health plans can use to review referrals.[40]
- Despite difficulties, several state health programs are working to develop relationships between school health centers and managed care organizations. In some states, SHCs have joined managed care provider networks and share in the primary care capitation payments; in others, SHCs have established reimbursement mechanisms for specific services to a managed care provider's patient.[7]

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Potential Weaknesses of SHCs

SHCs may face difficulties coordinating care with other community providers[20]

- Although Waszak & Neidell[36] report that over 90% of SHCs are able to refer their students to other community health care services and to private physicians, data from RWJ projects reveal that only about 50% of those students referred are seen by the referred-to provider.[37] This is in part due to the fact that health care institutions and providers are sometimes unwilling to treat uninsured youth.[20,37]
- Marks & Marzke[38] identified several barriers to referring adolescents from SHCs to other sources of care. These include adolescents' difficulty in obtaining transportation, SHCs' difficulty receiving information back from community providers on lab results or diagnoses, and, because many SHCs are located in very poor and underserved communities, they often face a dearth of providers who are able or willing to serve adolescents[4].
- Starfield[39] reports that coordination of care is generally a challenge for primary care providers due to problems obtaining complete medical records.
- Nevertheless, there are promising approaches to reducing these problems. SHCs in The RWJ School-Based Adolescent Health Care Program operate as satellite offices of larger medical institutions in the community. The RWJ Foundation claims this connection is critical to the success of coordinating referrals for school-based center clients who need outside care.[33]

Overall, little coordination exists between SHCs and managed care organizations[41]

- The GAO[4] reports that "managed care providers are often reluctant to incorporate school-based health centers into their networks because of concern that they lack control over the care provided." (p.10). In addition, there are financial risks associated with capitation for managed care organizations and school-based health centers. Finally, reimbursement arrangements are complicated by the need to "split the rates" when other providers/facilities provide the back-up for 24 hour coverage.[4]
- Legal issues may also create barriers to coordination between SHCs and managed care organizations. For example, SHCs may not meet managed care provider regulations and managed care providers are legally accountable for patient care.[41]
- The Office of Inspector General[41] found that among several efforts to coordinate managed care plans and SHCs, very few were addressing the issue of how to ensure confidentiality of services. However, in the St. Paul model, Zimmerman & Reif[40] report that efforts are taking place to assure confidentiality of both the billing statements and clinical data of clients who are referred for care.

Potential Strengths of SHCs

SHCs that integrate a community/population perspective seek to meet the needs of all children and adolescents in the area

- The Center for Population Options[42] has described community needs assessment, including comparison of local morbidity and mortality with state and national averages, identification of local health service providers, and identification service gaps and barriers, as "one of the most crucial components in designing a [SHC]" (p.7).

SHCs involve the community in planning and governance

- Most SHCs have advisory boards that include parents, members from local health departments, private sector organizations, and youth service organizations.[23]
- The RWJ Foundation requires that each SHC it supports form a community advisory committee to guide planning efforts.[38] In a process evaluation of their SHCs, they found that "foundation-imposed requirements proved to be good methods for managing controversy. Probably the most successful strategy was to involve parents of students in the affected schools in the planning process and ask them to act as advocates." (p.10).
- In a case study investigation of five sites that faced SHC opposition, the strategies considered most important in gaining public support by site proponents included a "broad-based, quality needs assessment," public education (through meetings and structured hearings), and involving key community leaders, medical providers, school personnel, parents, and students.[43]

Potential Weaknesses of SHCs

Few SHCs are able to expand their services beyond the student population

- Kirby, Waszak & Ziegler[25] (p.4) found "most clinics serve only their student population, but some are also open to dropouts (16%), children of students (15%), other family members of students (11%), and adolescents in the broader community (9%)."

FAMILY-CENTERED CARE*

Potential Strengths of SHCs

SHCs meet health care needs specific to children and adolescents without disrupting everyday functioning of other family members

- SHCs can increase the convenience of care for families because they eliminate the need for parents to leave work or to provide transportation[7].

Limited data suggest that SHCs and the services they provide are very popular with parents and families

- Despite significant controversy encountered by SHCs, research shows that most parents and communities support them, especially when they are closely involved in the planning of the centers.[17,18,19]

SHCs are challenged both to respect the confidentiality of their clients and to respect the rights of family members to be informed of a child's or adolescent's well-being

- Waszak & Neidell [8] reported that most SHCs require written parental consent before they accept students as patients. However, the researchers also report that, law permitting, many centers offer emergency services (68%), family planning (26%), and treatment for sexually transmitted diseases (30%) without parental consent.
- Consent forms used in The School-Based Adolescent Health Care Program[11] allow parents to exclude any services they do not want their children to receive. However, to date, less than 10% of parents have actually limited services to their children.

Many SHCs find creative ways to involve families

- Most SHC advisory boards include parent or family representatives.[20,21]
- The Denver School Based Health Centers distribute parent newsletters, organize teen theater troupes that introduce difficult topics to parents through skits and discussion, and hold seminars on family communication.[11]

Potential Weaknesses of SHCs

SHCs usually do not provide care to family members and therefore there is little or no opportunity to benefit from family information in assessing health needs or developing strategies for management

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CULTURALLY-COMPETENT CARE

Potential Strengths of SHCs

SHCs provide care for culturally diverse populations

- During the 1992-93 school year, racial and ethnic minorities accounted for 86% of the visits to the 24 SHCs supported by The School-Based Adolescent Health Care Program.[19]
- A 1993 survey by McKinney and Peak [2] found 44% of users of centers surveyed were African-American, 31% were white, 19% were Hispanic, 3% were Asian/Pacific Islander, and 2% were Native American. These utilization figures are similar to the schools' population breakdown of 38% African-American, 39% white, 17% Hispanic, 4% Asian/Pacific Islander, and 2% Native American.

Potential Weaknesses of SHCs

Little data are available to allow assessment of cultural competence of SHCs

A shortage of adequately trained providers exists, especially for bilingual/bicultural professionals, such as nurse practitioners and mental health professionals[20]

- These types of providers are vital to adequately and appropriately identify problems faced by adolescents of cultural minorities.

[d] *Due to these referral problems, Marks & Marzke[20] report that SHCs often prefer to provide as many services in-house as possible, employing part-time staff of different disciplines. One referral practice that the researchers commended was referral by medical practitioners in the SHCs to themselves at different sites when the particular treatment needed was not available at the SHC.*

[e] *It is important to note that the concept of "family-centered care" has not been clearly developed with respect to adolescents. In addition, as autonomy and privacy issues will transpire during adolescent development, the concept of "family-centered care" is not fully applicable to adolescents. "Family-centered care" may also represent a slightly different meaning in the context of SHCs. That is, SHCs usually aim not to provide care for the entire family, but to involve parents in the health care of their children.*

[f] *This may create new problems in ensuring appropriate communication with parents, for example, regarding treatment of problems such as asthma.*

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SUMMARY AND IMPLICATIONS FOR RESEARCH AND POLICY AND PROGRAM DEVELOPMENT

This assessment of the potential strengths and weaknesses of school health centers indicates that these facilities can play an increasingly vital role in the delivery of primary care to adolescents. SHCs have been shown to reduce many of the access barriers to health care faced by adolescents in general, and especially by medically underserved and low-income adolescents. SHCs provide a variety of services to adolescents, aiming to meet multiple physical, mental, and social needs. In addition, as administrators and staff of SHCs work to develop new programmatic responses to the changing health care environment, some are developing mechanisms, such as data management systems, to improve coordination with other community primary care providers. SHCs, through various planning, governance, and programmatic initiatives, also have evolved into unique community-based service providers. However, as evidenced in this Brief, SHCs are limited in their ability to function as health care homes to adolescents, due to limited operating hours, staff turnover, and problems coordinating care with other community providers.

A primary care perspective provides only one framework to examine SHCs. Because SHCs have diverse functions – as focal points for expanded health activities in schools, as multi-service centers incorporating social services, education, delinquency prevention, etc., and as parts of targeted health promotion interventions – it is possible to utilize other frameworks to analyze their effects on health, social, educational, and economic outcomes. Moreover, an urgent need remains to review both the models for providing school-based health services and the research designs that can be used to evaluate them. Evaluation data, which might present a case for the effectiveness of these centers, are limited.[3,46] Also, as evidenced by the sources used in the analysis table of attributes, there are few examples of published national or large-sample surveys. Consequently, researchers have had difficulties trying to uncover the effects of SHCs. Moreover, it is not clear what outcomes should be expected from these centers. Although reductions in school absenteeism, alcohol consumption, smoking, sexual activity, and pregnancy have been found in some schools with SHCs, these findings have not been consistent or well researched.[3]

Prior evaluation research also has suffered from a variety of methodological limitations.[26,47,48,49] These include lack of baseline data, lack of comparison groups, failure to consider self-selection in enrollment and use of health centers, substitution of the SHC for community-based providers (so that there may be a net decrease or no change in available resources in the community), inadequate sample size, failure to consider the prevalence of existing conditions or problem behaviors, inadequate conceptual frameworks, and poor fit between intervention intent and outcome measures. Quasi-experimental, time-series designs may have serious limitations given small effect sizes, low to moderate prevalence, and rapid turnover in the student body. Future evaluation efforts should consider longitudinal cohort designs (although these may suffer from rapid turnover as well) and randomized designs where possible and appropriate.

In conclusion, it should be noted that primary health care facilities rarely are independently able to serve the diverse health care needs of adolescents. Therefore, the success of school health centers will rely ultimately on their ability to establish a unique and sustainable niche within the larger health care delivery system. Communities that have successfully implemented school health centers are often those which have demonstrated the ability to maximize a stable mix of support from both public and private sources, ranging from state and federal grants, foundation support, and reimbursement from private insurance and Medicaid. With the emergence of managed care networks, especially among those serving Medicaid populations, it is particularly important that policy makers facilitate productive relationships between school health centers and the financiers of health care.

Debates about state and national health reform have generated increased public scrutiny about the accessibility and quality of health care services, and like the other players in the delivery system, school health centers should be evaluated according to objective criteria. These efforts will require a sizable commitment of resources to support the development of data collection, or management information systems, to guide policy makers and program planners. These data should specifically describe the needs and characteristics of the adolescents and their families, including measures of health status and health outcomes; service utilization; reimbursement methods; and indicators to describe the extent to which school health centers fulfill the attributes of primary care. The following policy and research questions represent only a small sample of those that may be useful in further evaluating the potentials of school health centers as key components of a primary health care system.

First Contact Care

- Does the availability of a SHC enhance adolescents' entry into the health care system?
- Does the utilization of SHCs reduce hospitalization and the use of emergency rooms by adolescents?
- Do SHCs improve access to health care for adolescents with specific health problems?

Continuous Care

- What policies can be enacted to enhance the ability of SHCs to function appropriately as "health care homes"?
- How does the continuity of care provided in SHCs compare with that provided in other settings? What effect does this have on health outcomes?

Comprehensive Care

- What SHC services are considered "essential" by adolescents, their families, and health care providers?
- To what extent do SHCs provide those essential services?
- Do comprehensive or targeted SHC programs have a greater impact on specific health outcomes?

Coordinated Care

- What federal, state or local incentives will promote coordination between SHC and community-based and managed care organizations?
- Which financial and/or organization models of SHC will best facilitate coordinated care?
- What services are better provided on-site in SHC and which are better provided by referral?

Community-Oriented Care

- How and to what extent do SHCs involve the community in its planning efforts?

Family-Centered Care

- How can SHCs best foster appropriate family involvement in the health care of their adolescents?

Culturally Competent Care

- How do SHCs compare with other parts of the health care delivery system in their ability to provide culturally-competent care?

Contributing authors to this policy research brief are John Santelli, MD, MPH and Madlyn Morreale, MPH (CAHP) and Alyssa Wigton, MHS and Holly Grason, MA (CAHPC). For additional copies, please contact the JHU Child and Adolescent Health Policy Center, The Johns Hopkins University School of Hygiene and Public Health, Department of Maternal and Child Health, 624 N. Broadway, Baltimore, MD 21205, (410) 550-5443.

Development of this document was supported in part by a Cooperative Agreement (MCU 243A19) from the Maternal and Child Health Bureau (Title V, Social Security Act), Health Resources and Services Administration, Department of Health and Human Services.

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January 1995

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FEEDBACK FORM

Dear Colleague,

We are very interested in your comments on the usefulness of this MCH Policy Research Brief focusing on school health centers and primary care. Your input will contribute significantly to the content and design of future policy research briefs developed at the JHU CAHPC and will assure that the briefs are designed to provide the most useful planning- and advocacy-related information possible to state and local MCH program personnel.

Please answer the few questions listed below and mail or fax this form back to ***Alyssa Wigton, MHS, Project Coordinator, JHU Child and Adolescent Health Policy Center, 624 North Broadway, Baltimore, MD 21205. FAX: (410)955-2303.*** *Thank you very much for your help!*

1. Do you find the brief's format to be user-friendly? _____ Yes _____ No

   If yes, how so? _____

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2. Is the research information provided in the brief useful to your work? _____ Yes _____ No

   If yes, what specific component(s) is(are) relevant to your needs (i.e., the analysis, policy research questions, bibliography, etc.)?

   _____

   _____

3. Are there other primary care, systems development, or accountability, or other child health issues that would be of interest to you as the focus of a future MCH Policy Research Brief? If so, please share your ideas with us:

   _____

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4. Please provide any additional comments about the brief.

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5. What is the nature of your professional position?

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